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EXAMINER

SODERQUIST, ARLEN

ART UNIT PAPER NUMBER

1743

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/381,828

Applicant(s)

SKOLD, ROLF

Examiner

Arlen Soderquist

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. In view of the Appeal Brief filed on March 3, 2005 and the discovery of new prior art, PROSECUTION IS HEREBY REOPENED. New grounds of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. Claim 5 is objected to because of the following informalities: "with" is not correctly spelled in the last line of the claim. Appropriate correction is required.

3. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, "the whole selected temperature range" does not have antecedent basis and will be treated as "a selected temperature range" for examination purposes. Additionally, it is not clear if the selected temperature range of step (3) is the same or different from the desired temperatures of step (4). In claim 2 it is not clear if the "vice versa" language in the step requires the series of measurements to be made as temperature is raised then lowered or lowered then raised or if the temperature must be raised then lowered then lowered then raised. For examination purposes the step is being treated as the vise versa indicates that there are two alternatives for the temperature change made during the series of measurements. In claim 4 it is not clear if the limitation constitutes a further limitation of claim 1 since step 2 of claim 1 clearly indicates that the control program for change of component concentration is in a computer. In claim 7, element ii), the control equipment comprise two different things: control programs and a dosage organ. For examining purposes examiner will treat element ii) as two different elements: a component concentration control device comprising a component concentration control program for changing a component concentration in a predetermined manner and a dosage organ for adding a second liquid to change the component concentration of liquid in the measuring cell and a temperature control device comprising a temperature control program to change the

temperature of the measuring cell in a predetermined manner. Claim 8 appears to be trying to further define the structure of the temperature control device (equipment) rather than redefine it as that claim language implies. In claim 9 it is not clear if the dosing organs include or are in addition to the dosage organ of claim 7. For examining purposes examiner is treating the claim as the component concentration control device further comprises another dosage organ to withdraw liquid from the measuring cell and the control program controls the dosage organs to withdraw and inject the same amount of fluid into the measuring cell each time the component concentration is changed.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 1-2, 4-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tondre (newly cited and applied) in view of Rouse. In the paper Tondre teaches an automated device and method for the determination of isotropic microemulsion phases of ternary systems including a nonionic surfactant. The advantages and limits of an automatic procedure which permits the fast determination of the composition limits of isotropic microemulsion phases of water-oil-surfactant systems were determined. This system is based on detecting the temperature defining the lower and upper miscibility curves by the change of turbidity to study the solubilization of oil or water in binary mixtures of nonionic surfactants and water or oil and then reconstructing the usual ternary phase diagram at any chosen temperature. The method was especially well suited for the investigation of systems including nonionic surfactants which are

very sensitive to temperature changes. Four systems were tested including hydrogenated as well as fluorinated surfactants and oils. Data obtained for systems having neat turbidity changes were easy to interpret. For systems containing a liquid crystalline phase the turbidity-temperature curve was more difficult to interpret. The last paragraph of page 581 teaches that the method is particularly useful when dealing with expensive products that one cannot afford to prepare a sealed ampoule for each point of interest in the phase diagram. The apparatus is shown in figure 2 and is substantially similar to the claimed structure. Figures 3, 4, 5 and 6 show the temperature/turbidity data along with the concentration increments added. It is noted that the concentration increments in these figures are all within the claimed range. Tondre differs from the instant claims in that there is not a central computer to control the parts and the data is not displayed in a three dimensional diagram.

In the paper Rouse teaches automation of phase diagram recording. An automated titration system was developed for generating data to construct phase diagrams, which are extremely useful in the development of personal and household products. The authors describe the system and how it can be used to perform the technique of dual titration. A clear microemulsion sample is titrated with oil until the dispersion turns cloudy (defined to be a transmittance < 90%). This mixture is then dosed with a certain quantity of cosurfactant, more than enough to clear the mixture. The sample is again titrated with oil. This process continues until the sample no longer clears upon adding cosurfactant. The resulting measurements of oil uptake can be used to characterize the boundaries of the L1 or oil-in-H₂O microemulsion region of the phase space. Experiments for up to sixteen samples can be performed, each having individual setup and operating instructions. Features include completely automated operation, computer-controlled 2-speed mixing, viscosity detection at the end-point condition, and the storage of results in a computerized format. Page 14 teaches the calculation of the component concentration by the computer. Figures 1 and 6-7 show multidimensional representations of the data with figure 7 being a contour plot. From the experimental section it is clear that the device and method use a single vessel to which additions of a solution that changes the concentration of at least one of the components is added in increments. It is noted that the ethylene glycol monohexyl ether (C₆E₁) used in the experiments is a nonionic surfactant.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the computer of Rouse and use it to store the data of Tondre and produce three dimensional diagrams of the data as shown by Rouse because of the ability to map out an emulsion property, overcome the tedious nature of the process and its extreme usefulness in the development of products as taught by Rouse. Additionally the Courts have held that providing a mechanical or automatic means to replace manual activity which accomplishes the same result is within the skill of a routinier in the art (see *In re Venner*, 120 USPQ 192 (CCPA 1958)).

6. Claims 3 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The art of record does not teach or fairly suggest the method as claimed in which a volume of tested sample is replaced by an equal volume of liquid having the analyte at a concentration different than the tested sample to form a new sample for testing or an apparatus as claimed which has means to control the apparatus to perform the method of claim 3.

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The newly cited and applied Tondre reference clearly teaches apparatus and method in which the concentrations are changed by adding a solution of different concentration to the original sample container with successive or incremental additions and measuring a dependent property as the temperature is varied. Both Tondre and Rouse are directed to the type of liquids and diagrams that the instant specification is directed toward (see pages 1 and 5-6 of the instant specification). Examiner also considered the claims closely and determined that there are problems with clarity. Examiner suggests that some clarity problems would be helped by changing verb tense in the method claims. As a partial example, claim 1 could be written as --1) measuring at least one dependent physical and/or chemical property of the liquid in a measuring cell as a function of temperature and component concentration, ... changing a component concentration in the liquid by adding in one step or gradually a predetermined amount of another liquid ... into the measuring cell according to a component concentration control program--.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references deal with the production of multidimensional phase diagrams.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arlen Soderquist whose current telephone number is (703) 308-3989. After about December 16, 2003, this number will change to (571) 272-1265 as a result of the examiner moving to the new USPTO location. The examiner's schedule is variable between the hours of about 5:30 AM to about 5:00 PM on Monday through Thursday and alternate Fridays.

For communication by fax to the organization where this application or proceeding is assigned, (703) 305-7719 may be used for official, unofficial or draft papers. When using this number a call to alert the examiner would be appreciated. Numbers for faxing official papers are 703-872-9310 (before finals), 703-872-9311 (after-final), 703-305-7718, 703-305-5408 and 703-305-5433. The above fax numbers will generally allow the papers to be forwarded to the examiner in a timely manner.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

April 13, 2005



ARLEN SODERQUIST
PRIMARY EXAMINER



Jill Warden
Supervisory Patent Examiner
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